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COMPLETE SPECIFICATION.

Improvements in Transformers for High Frequency Currents.

We, GUGLIELMO MARCONI, LL.D., D.Sc., and WILLIAM SNOWLEY ENTWISTLE, Electrician, both of Marconi House, Strand, London, W.C., do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

- 5 According to this invention the primary of a transformer for high frequency currents is a split ring or helix built up of conductors insulated from each other which pass from end to end of the ring or helix and in so doing are twisted around it.

- 10 Figure 1 is an edge view, Figure 2 a side view and Figure 3 a section of a large split ring primary made according to this invention. In the example shown the ring is about five feet in diameter and one foot thick but these dimensions may be varied very widely according to circumstances.

- The ring has a non-conducting core *a* preferably built up (as shown in section at Figure 3) of boards glued together and connected by wooden pins. *b* are the 15 insulated conductors the ends of which are connected to terminal plates *c*.

- These conductors are merely indicated diagrammatically; in practice they touch each other and there are about one hundred and fifty of them each consisting of a number of insulated wires stranded or interwoven together into a cable in the manner commonly adopted in conductors of high frequency currents.

- 20 The drawings show the conductors only once twisted around the ring and this is generally the best arrangement but they may be twisted twice or more around it but fractions of turns should be avoided. In the case of a helix the conductors are preferably twisted once around each of its turns.

The ring or helix is preferably of circular section as shown.

- 25 Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. The primary of a transformer for high frequency currents consisting of a split ring or helix built up of insulated conductors which pass from end to 30 end of the split ring or helix and are also twisted around it substantially as described.

2. Primaries of transformers for high frequency currents substantially as described and illustrated in the drawings.

Dated this 13th day of August, 1913.

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G. MARCONI.
W. S. ENTWISTLE.



Fig. 1.

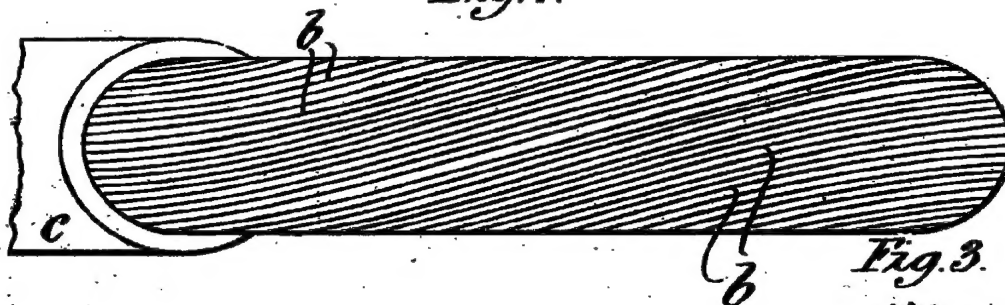


Fig. 3.

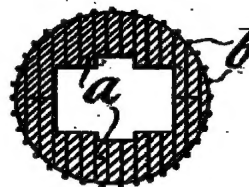


Fig. 2.

